EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Steven Fischman 34,594 on September 23, 2008.

The application has been amended as follows:

IN THE CLAIMS:

Please see attached.

IN THE SPECIFICATION:

DRAWINGS: In Fig. 5: "Indexs" is apparently "Indexes". This occurs three times along the dotted arrow lines.

2. The following is an examiner's statement of reasons for allowance: The prior art does not teach nor render obvious each and every limitation of the claimed invention. Specifically, the prior art does not teach that the default-route-prefix is a shortest prefix that covers only destination IP addresses that have no matching prefix in the routing table and that the first lookup step for the destination IP address being a prefix thereof is searched in the routing table cache and when not found being searched in the routing table and then when the second lookup step finds the destination address prefix, the found destination is entered into the routing table cache.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHILIP J. CHEA whose telephone number is (571)272-3951. The examiner can normally be reached on M-F 6:30-4:00 (1st Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Philip J Chea
Examiner
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PJC 9/23/08

Claim 1. (Canceled)

Claim 2. (Currently Amended) The method as recited in claim [[1]] 4, wherein the default-route-prefix (P_d) is determined to be said prefix of at least the destination IP address (*d*).

Claim 3. (Canceled)

Claim 4. (Currently Amended) [[The]] A method comprising: ~~as recited in claim 3~~

processing a data packet, having a destination IP address (*d*), towards a routing destination;

determining a default-route-prefix (P_d) that is a part of the destination IP address (*d*) and is provided only in a routing table cache (L_1) during a default-route determination step, when in the routing table cache (L_1) and in a routing table (L_2), there is no entry with a destination address prefix that is a prefix of the destination IP address (d), wherein the default-route-prefix (P_d) is a shortest prefix that covers only destination IP addresses that have no matching prefix in the routing table (L_2),

wherein the routing table cache (L_1) comprises a prefix that is a part of another destination IP address and the destination IP address (*d*);

performing a first lookup step for the destination IP address (*d*), the destination address prefix being a prefix of the destination IP address (*d*) is searched in the routing table cache (L_1), and,

if said first lookup step results in not finding such destination address prefix, performing a second lookup step for said destination IP address (*d*), the destination address prefix being a prefix of the destination IP address (*d*) is searched in the routing table (L_2),

wherein if the second lookup step on the routing table (L_2) results in finding the destination address prefix being said prefix of the destination IP address (*d*) a matching destination address prefix,

the found destination address prefix entry is entered into the routing table cache (L_1) in a cache update step, and the data packet is forwarded in a destination forwarding step to a corresponding routing destination.

Claim 5. (Currently Amended) The method as recited in claim [[3]] 4, wherein if the second lookup step results in not finding the destination address prefix being said prefix of the destination IP address (*d*), in a default forwarding step the data packet is forwarded to a default routing destination.

Claim 6. (Currently Amended) The method as recited in claim [[1]] 4, wherein in a default-route caching step, the default-route-prefix (P_d) is entered together with a default routing destination as an entry into the routing table cache (L_1).

Claim 7. (Currently Amended) The method as recited in claim [[3]] 4, wherein in the first lookup step the routing table cache (L_1) is searched for covering path entries that reside in the routing table cache (L_1), the covering path entries covering all prefixes that exist in the routing table (L_2).

Claim 8. (Previously Presented) The method as recited in claim 7, wherein in an event that the first lookup step results in finding no covering path entry for the destination IP address (*d*), the data packet is forwarded to a default routing destination in a default forwarding step.

Claim 9. (Previously Presented) The method as recited in claim 7, wherein in an event that the first lookup step results in finding one of said covering path entry for the destination IP address (*d*), in the second lookup step for said destination address (*d*) the destination address prefix being said prefix of the destination address (*d*) is searched in the routing table (L_2).

Claim 10. (Currently Amended) The method as recited in claim [[3]] 4, wherein in an event that the first lookup step results in finding the destination address prefix being said prefix of the destination IP address (*d*), the data packet is forwarded in a destination forwarding step to a corresponding routing destination.

Claim 11. (Canceled)

Claim 12 –15. (Canceled)

Claim 16. (Currently Amended) An apparatus for routing data packets comprising:

~~means~~ a router device for processing a data packet, said data packet having a destination IP address (*d*), towards a routing destination; and said router device having an associated memory for supporting routing table cache (L_1) and routing table (L_2);

means implemented by said router device for determining a default-route-prefix (P_d) that is a part of the destination IP address (*d*) and is provided only in [[a]] the routing table cache (L_1) during a default-route determination step, when in the routing table cache (L_1) and in [[a]] the routing table (L_2), there is no entry with a destination address prefix that is a ~~said~~ prefix of the destination IP address (*d*), wherein the default-route-prefix (P_d) is a shortest prefix that covers only destination IP addresses that have no matching prefix in the routing table (L_2),

wherein the routing table cache (L_1) comprises a prefix that is a part of another destination IP address and the destination IP address (*d*),

wherein said means implemented by said router device performs a first lookup step for the destination IP address (*d*), the destination address prefix being a prefix of the destination IP address (*d*) is searched in the routing table cache (L_1), and,

if said first lookup step results in not finding such destination address prefix, said means implemented by said router device performs a second lookup step for said destination IP address (*d*), the

destination address prefix being a prefix of the destination IP address (*d*) is searched in the routing table (L_2),

wherein if the second lookup step in the routing table (L_2) results in finding the destination address prefix being said prefix of the destination IP address (*d*) a matching destination address prefix, the found destination address prefix entry is entered into the routing table cache (L_1) in a cache update step, and the data packet is forwarded in a destination forwarding step to a corresponding routing destination.

Claim17. (Canceled)

Claim 18. (Currently Amended) A computer program product comprising a computer usable medium having computer readable program code means embodied therein for causing a processing of a data packet, the computer readable program code means in said computer program product comprising computer readable program code means for causing a computer to effect the steps of claim [[1]] 4.

Claim 19. (Canceled)